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USDA Forest Service
Southern Region
1720 Peachtree Road, NW
Atlanta, GA 30367
attn: John Greis

Dear Mr. Greis:

On behalf of North Carolina Environmental Defense, we respectfully submit these comments on the recently released draft document entitled "Southern Forest Resource Assessment." We commend you for undertaking this difficult piece of work. You had an ambitious task set for you and gathered much of the relevant data needed to provide an accurate assessment of the state of forest resources in the Southern Region. The data presented in the draft document, taken together, provide a compelling picture of the current and future threats to forest resources throughout the region -- threats that cannot be overstated because of the huge biological, economical, and recreational demands placed on our forests.

Unfortunately, the significance of much of these data is obscured or lost on the reader because information on forest trends is not well integrated with data on ecological trends. And more importantly, this lack of integration diminishes the value of the draft report as a tool to inform future state and federal policymaking related to forests. It is critical that the final report be policy-relevant.

We incorporate by reference the more detailed comments submitted by the Southern Environmental Law Center. In these comments, we focus narrowly on the draft assessment's treatment of biodiversity.

Over all, we found the report seriously incomplete in its coverage of the ecological and socioeconomic impacts associated with both the loss of a projected 30 million acres of forest over the next 40 years to development and with continued unsustainable levels of timber harvesting throughout the region. Further, the draft report fails to adequately assess the effects on biodiversity of the intensive forest management practices needed to permit such high levels of production. There was also scant mention of the biodiversity impacts of the overall projected future decrease in hardwood community acreage in the Southeast and the concomitant rise in softwoods, especially planted softwoods, on converted sites.

According to the draft assessment, virtually all community types in the Southeast are considered "critically imperiled." In fact, upland hardwoods is practically the only natural community type not listed as such. That said, this community type is also functionally critically imperiled in the region. Although the FIA category of upland hardwoods is common, very few of the upland hardwoods stands occur at anywhere near their functional size, and many rare types (*e.g.* calcareous mesic forests) are subsumed within that broader category. Moreover, the draft's discussion of plant species of conservation concern was limited to a single map presenting numbers of species by county. Because there is no supporting text, this map is of limited value and it trivializes the severity of the problem. We strongly recommend that the final report include a finer breakdown of classes – greater than seven G1/G2 species is not particularly informative, especially when many of these counties with that designation are forecast to be in areas of intensive harvest and forest management.

Despite more than 12 years of direct funding by the Southern Region of the US Forest Service, The Nature Conservancy's (TNC) *International Classification of Plant Communities* was on one hand acknowledged as a very important contribution to conservation, but, on the other hand, was not apparently used in **any of the analyses.** Moreover, the use of TNC's *Rare Plant Communities of the Conterminous United States* published in 1995 is a serious oversight given the amount of updated information easily obtained on the Natureserve website (www.natureserve.org). The classification by Noss *et al.* is too coarse for a meaningful analysis and we urge you to use the TNC classification at at least a functional group level.

It is also important that the final document present an integrated picture of all of the silvicultural requirements that went into your models of future timber supply and link those with their ecological and economical impacts. One specific example is found in the statements below:

- "timber market models have generally assumed management intensity will be increased to capture this productive potential," (p. 58)
- the most intensive management approaches include planting of genetically improved seedlings, applying fertilizer, and controlling competing vegetation," (p. 59)
- "forest pest-related mortality, potentially high in pine forests, is minimized by active management," (p.59)
- "cultivating tree species beyond their natural range and altering forest composition can predispose forests to insects and disease outbreaks. Conversely, management strategies and direct intervention can mitigate the spread of and damage caused by these outbreaks" (p. 18)
- "mortality caused by insects and diseases, …, could increase commensurate with the expected increase in pine plantation, but this will depend on the degree of management." (p. 19)

Taken together, these statements point to the assumption underlying the assessment that planted pine will be the predominant forest type by 2040. But the draft fails to

adequately acknowledge the environmental consequences associated with such a trend. For example, it is irrefutable that if the above forecasts play out, serious adverse consequences will follow because of the requirements for soil-disrupting pre-planting treatments (such as ripping and bedding, etc.) and heavy applications of herbicides and pesticides.

Discussions of the ecological effects of such practices are either not addressed at all, or addressed under a different topic. For example, you state that pine plantations on converted sites can have increased diversity over sites planted on former agricultural fields, and that these former agricultural sites "can develop considerable grass and forb diversity in early stages, but because they lack the biological legacies of earlier forests, their vegetative diversity is limited for a longer period of time (p. 60)." We suspect that greater than 50 percent of the "grass and forb diversity" is contributed by exotic species or native species with weedy habits, but the draft does not apparently address this issue. We further question the legitimacy of mentioning the value of forest legacies when the recommended management techniques are designed to obliterate those legacies.

Furthermore, the draft report states that, contrary to management requirements, planted pine stands vary considerably in their composition. It is stated that wildlife species that thrive in early successional habitats use plantations heavily during the first few years after planting, although habitat values decline with heavy stocking, application of herbicides, and other intensive management practices (page 69). It is unclear why the assessment did not go beyond these elementary questions to more substantive ones. For example, you did not ask what type of habitat do these plantations provide after the first few years? How species-rich are these habitats in juvenile and mature stages? An additional question that should be addressed is what percentage of the species attracted to these habitats face any threat to their continued existence, or are they globally secure, opportunistic species able to utilize a wide variety of severely disturbed habitats? And, additionally, what is the conservation status of the species and plant communities that they replaced? A larger question that also needs answering is what will be the long-term genetic cost to biodiversity of planting genetically improved pine seedlings and of planting only pine seedlings, while eliminating other vegetation, especially when considering global warming and increased levels of CO_2? Furthermore, the draft acknowledges that the massive alterations from European settlement still influence forest structure and function yet there is no discussion of the legacy we are likely to leave if we inflict intensive silviculture upon ever-increasing numbers of acres.

Time constraints require us to limit our comment to these. We look forward to the final document and respectfully request that our recommendations be incorporated.

Sincerely,

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